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TRANSPORTATION AND ECONOMIC POLICY:
REVIEW OF CURRENT ISSUES
ONTARIO BACKGROUND PAPER

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REVIEW OF CURRENT ISSUES

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TABLE OF CONTENTS

SUMMARY

This paper provides a brief review of economic issues in the development of future transportation policy.

The services provided by transportation networks have a crucial impact on the economy of Canada. By creating connecting links between the provinces they enhance the mobility of people, move commodities to their destinations, stimulate the economic development of Canada and its regions, improve the accessibility of remote areas and constitute a tool to accelerate the growth of particular regions of the country.

Jurisdictional Division

Both the federal and provincial governments have jurisdiction over transportation. The jurisdictional powers tend to be divided according to modes of transport. However, because of the complementary nature of transportation systems, intergovernmental co-ordination is a necessary aspect of ensuring transportation efficiency in support of economic and social goals.

Areas for Joint Provincial Co-operation

Interprovincial and intergovernmental co-operation in the area of transportation substantially benefits all regions of Canada. Some current transportation issues that will be critical to the future economic development of Canada are freight rate disparities, the development of new urban and inter-urban transport systems, and port administration and financing.

SUMMARY

This paper provides a brief review of pertinent issues in the development of future transportation policy.

The services provided by transportation networks have a crucial impact on the economy of Canada. By creating connecting links between the provinces they enhance the mobility of people, move commodities to their destinations, stimulate the economic development of Canada and its regions, improve the accessibility of remote areas and constitute a tool to accelerate the growth of particular regions of the country.

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Areas for Joint Provincial Co-operation

Interprovincial and intergovernmental co-operation in the area of transportation substantially benefits all regions of Canada. Some current transportation issues that will be critical to the future economic development of Canada are freight rate disparities, the development of new urban and inter-urban transport systems, and port administration and financing.

Freight Rates

The Canadian railway freight rate structure is complex and suffers from anomalies which affect the economies of most provinces. An analysis of a number of these anomalies, by the Federal Government, is now under way. The basic principles of freight rate determination are also under review at this time and could result in a move towards pricing on a cost rather than a competitive basis. Such action could have long-term economic significance for those regions faced with high transportation costs in gaining access to large-scale markets.

Urban and Inter-urban Transport

The rapid urbanization process in Canada has required the development of innovative urban public transit and inter-urban passenger transport systems capable of satisfying existing and future transportation requirements. The public sector is a major customer and developer in this process. Growth of a rationalized and efficient transit and inter-urban equipment manufacturing industry in Canada could make a significant contribution to national industrial development in the late 1970's and early 1980's.

Ports

Canada's larger ports fall into the following two categories:

1. those which are directly responsible to the federal National Harbours Board and are subsidized, and
2. commission ports, required to operate on a commercial basis.

The economic impact of ports spreads through all regions of Canada and an equitable system of port charges is, therefore, a significant factor in the formulation of national economic development policies.

INTRODUCTION

The economic and social development of Canada has always depended on transportation systems linking all provinces together and providing the necessary access to world markets for Canadian goods. Today, the role that transportation plays in the economy has not diminished. While the primary objective of transport is to move goods and people at the lowest total cost, transportation is also being used as a tool for economic development of the country's regions by steering industries to particular locations, influencing land uses, and facilitating accessibility and social mobility.

JURISDICTIONAL RESPONSIBILITIES OVER TRANSPORTATION

Both the federal and provincial governments have jurisdiction over particular sectors of transportation. The jurisdictional powers and responsibilities tend to be divided according to modes of transport, with the federal government having primary jurisdiction over rail, water, air and pipeline modes and the provinces having jurisdiction over highways and urban transit systems.

Although each mode of transportation has a technical independence from the others, there may be either significant mutual complementarity or competition in service delivery. Also, different transportation modes should serve common economic and regional objectives. For this reason, there is increasing concern with intergovernmental co-ordination in the development of new transportation policies.

It is increasingly evident that in developing efficient, low-cost and inter-acting transport systems, there needs to be greater involvement by the provinces in all aspects of transportation. Thus, the importance of intergovernmental liaison grows with the increasing technical complexity of the total transportation network. Significant, in light of the federal review of the National Transportation Act, are provincial interests such as regional planning and industrial development concerns, and their interface with urban and inter-urban passenger transport systems.

SELECTED TRANSPORTATION ISSUES

Freight Rates

Until 1967 all published railway freight rates were subjected to the federal government's approval. With the introduction of the National Transportation Act, the railways were given freedom to set their own rates in order to meet competition from other modes of transport. Any changes to the published rail freight rates are required to be filed with the Canadian Transport Commission but do not need to be approved.

There are five basic types of railway freight rates. These are listed in Table I below, together with the proportion of total ton-miles and revenue accounted for by each rate type.

RAILWAY FREIGHT TRAFFIC BY TYPE OF RATE — Table I

Type of Rate	Per Cent of Total Ton Miles	Per Cent of Total Revenue
Class Rates	0.8	2.6
Regular Commodity Rates	29.6	25.6
Competitive Commodity Rates	23.8	37.0
Agreed Charge Rates	17.8	24.9
Statutory Rates	28.0	9.9
	100.0	100.0

Source: Canadian Transport Commission, Railway Transport Committee, "Waybill Analysis", 1972.

The Canadian freight rate structure is the result of decades of legislation, litigation and court decisions, and the cross currents of often clashing interests of carriers, shippers and regions. As a result it has developed many anomalies. For example, the freight rate for frozen food shipments between Lethbridge and Toronto is $2.16 for 100 lbs., while from Toronto to Lethbridge it is $2.92½. On the other hand, to move 100 lbs. of steel from Toronto to Vancouver costs $1.68, while from Toronto to Saskatoon the charge is $2.47 per 100 lbs.

From an examination of the Waybill Analysis (undertaken by the Canadian Transport Commission in 1971), it is evident that total tonnages shipped and average revenues per ton-mile of shipment differ substantially between Canadian regions.

TRAFFIC FLOWS BETWEEN REGIONS, 1971 Table 2

Traffic Flow	Ton-Miles	Average Revenue per Ton-Mile (¢)
Maritimes to Eastern	25,300,510	1.31
Eastern to Maritimes	39,822,016	1.85
Maritimes to Western	2,196,636	2.10
Western to Maritimes	9,267,762	1.30
Eastern to Western	67,567,003	2.45
Western to Eastern	87,711,317	1.52

Source: Waybill Analysis, C.T.C. 1972. Computed by the Ontario Ministry of Transportation and Communications.

The low average revenue per ton-mile of shipment between the Maritimes and Eastern Regions, Western and Maritimes Regions, and Western to Eastern Regions reflects freight subsidies and statutory freight rates available to shippers moving their commodities between these regions.

The Government of Canada has, over the years, assisted shippers of selected commodities or in certain areas by bearing a portion of their rail transport costs. This assistance has taken the form of either granting of statutory freight rates (Crow's Nest Pass Agreement) or straight subsidy (Feed Freight Assistance Act, Maritime Freight Rates Act, and the Atlantic Region Freight Assistance Act). In 1972-1973 the federal government's freight rate assistance resulting from these acts was estimated at $47.6 million.

The past and present schemes of rail freight subsidies have been a complicating factor in the development of efficient transportation

systems. The railways, having freedom of action only in respect of a portion of their total rate structure, tend to compensate where they can, even by setting rates which either retard or prevent the development of new traffic in the areas affected. In some parts of Canada, industry has the benefit of statutory rates or rate subsidies not offered to other regions of the country. While these subsidies and statutory rates assist some shippers to overcome a geographic disadvantage, other shippers, including low-profit industries, pay higher freight rates.

Rate disparities observed in rail services are also found in road transport as trucks attempt to meet rail competition. Correction of rail rate distortions will likely eliminate some disparities in truck rates.

An analysis of several rail rate anomalies is now under way by the federal government. The basic principles of freight rate determination are also under review at this time and could result in a move towards pricing on a cost rather than a competitive basis. Such a move could have long-term economic significance for those regions faced with high transportation costs in gaining access to large-scale markets.

Urban Transport

One of the most dynamic processes in Canada today is the rapid growth of urban centres. It has been estimated that by the end of the century, nine cities (Toronto, Montreal, Ottawa, Vancouver, Quebec City, Winnipeg, Edmonton, Hamilton and Calgary) could account for about 70 per cent of total Canadian population. Thus, the development of cheap, efficient and energy conserving urban public transport systems is a pressing issue in most Canadian urban centres.

The "best" mix of road, rail and subway transport systems is an important consideration, together with a proper balance between highway construction and public transport investment. With the exception of Toronto, the volume of public transit activities has declined in the last 20 years. In the 1960's, an estimated 90 per cent of all urban passenger miles was attributable to the automobile, and it has become increasingly evident that the social costs of accommodating private automobiles are too high. Consequently, public opinion has gradually shifted in favour of public transit. In financial terms, the operational cost of a six-seat car in 1973 was estimated to be 13.1 cents per passenger mile (parking charges included), while the operational cost of a bus and subway are 3.8 cents and 3.0 cents per passenger mile, respectively. These figures include maintenance and capital amortization costs.

OPERATING COSTS OF URBAN PASSENGER VEHICLES
(1973 Estimates)

Table 3

Mode	Unit Cost ($)	Operating Cost ($ per Mile)	Average Occupancy (# Passengers)	Cost per Passenger Mile (¢)
Small Car*	2,500	$0.15	1.6	9.1
Big Car*	5,000	0.21	1.6	13.1
Large Bus	45,000	1.15	30.0	3.8
Taxi	3,300	0.78	2.0	39.0
Dial-A-Bus	9,000	1.39	8.0	16.2
Subway Car	235,000	1.50	50.0	3.0

Source: N. D. Lea & Associates Ltd., Toronto.
* Includes parking costs; for details, see Appendix.

The importance of efficient urban public transport systems to the quality of life for urban residents has been recognized by all levels of government. In November 1972, the Ontario Government announced its new urban transportation policy for Ontario which shifted emphasis from urban expressways to a variety of transportation facilities.

In conjunction with this policy, the Province has created the Ontario Transportation Development Corporation.[1] The role of the Corporation is to:

- develop innovative transit equipment of greatly improved technical capacity; and
- stimulate a major transit manufacturing industry in Canada through financing and encouraging a continuous advanced-transit research and development program.

Growth of a rationalized and efficient transit and inter-urban equipment manufacturing industry in Canada will make a significant contribution to national industrial development in the late 1970's and early 1980's. The participation of other provinces and the federal government would be a major step in making UTDC national in scope. This is particularly important in view of the key role played by the public sector as the major customer and developer of major transportation systems.

There are great economic benefits to be gained from meeting world-wide demand for urban transit equipment. Capital expenditures, until 1985, on transit equipment for the domestic market alone have been estimated at $3.3 billion. In addition, other countries will

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[1] The name of the Corporation is to be changed to the Urban Transportation Development Corporation (UTDC) to reflect its established objective that it conduct its activities on a national scale.

spend large amounts, creating significant Canadian export potential.

Joint interprovincial co-operation should strive to achieve:

- a strong Canadian-based research and development capability and a high level of investment in advanced transit technology programs;
- a stable and integrated industrial capacity to meet the demand of a rapidly growing domestic and international marketplace where the only customers are governments; and
- a co-ordinated domestic market that provides continuity of demand to enable taking advantage of the international demand.

Inter-Urban Passenger Transport

In Canada, the process of urbanization has tended to concentrate mainly along "urban corridors" such as Vancouver-Victoria (containing about 60 per cent of the population of British Columbia), Edmonton-Calgary (with over 55 per cent of Alberta's population), and Quebec City-Windsor. The latter corridor contains over 60 per cent of Ontario's population and over 56 per cent of Quebec's population.

In the inter-urban movement of people by common carrier the greatest emphasis is being placed on speed, frequency, direct downtown to downtown service, safety and convenience. Two presently available technologies seem to meet these requirements: short take-off and landing (STOL) aircraft and rail technology.

The STOL strategy is based upon the idea that a STOL aircraft possesses suitable low-noise and short-takeoff and landing characteristics enabling it to operate from small airports located within developed urban areas. Thus, travelling time using STOL can be less than by a conventional aircraft because of savings in access and terminal processing time.

The federal government's experimental STOL air service between Montreal and Ottawa will test the technical and economic feasibility of STOL operations and assess public reaction to the service. It is the first trial of the total STOL system in Canada. If the program proves successful, it could be applied to other corridor routes in Canada to the benefit of densely populated areas in various provinces.

The recently experienced energy shortages, together with the increasing public awareness of the potential effects of airports on the urban environment, have resulted in a renewed public interest in rail technology as a prime mover of people. Existing rail technology, however, has not yet resulted in rail transportation speeds capable of competing with aircraft. Some track improvements, such as new alignments and/or rail-car improvements, can effectively increase rail speed to 120 miles per hour. Presently, the Toronto to Montreal trains operate at speeds averaging up to 90 mph, but higher speeds are required to attract more passengers.

The high cost involved in new alignment (for the entire 335 miles between Montreal and Toronto, the cost was estimated at $500 million in 1970), suggests the desirability of introducing a new technology, which is free from the present limitations of railroad operation. One of the most promising ground transport technologies is the Tracked Air Cushion Vehicle (TACV) concept. It is a system of high speed vehicles supported and guided by cushions of air along a fixed guideway, and capable of speeds of 300 mph. The cost of building such a system between Toronto and Montreal for inauguration in the 1980's has been estimated at $1 billion.

The federal government has indicated it intends to establish a Canadian Passenger Transport Corporation to take over and develop all rail passenger services. The Corporation could provide an important mechanism for bringing on stream new passenger rail technologies developed in Canada.

Ports

The harbours of Canada can be grouped according to the way they are administered. Most of the large ones, such as Montreal, Saint John, Halifax, and Vancouver, come under the federal National Harbours Board. Others (for example, Toronto, Hamilton, Thunder Bay) are operated by independent harbour commissions. Smaller ports are administered directly by the federal Ministry of Transport; there are also some private ports.

The federal government has an overall jurisdiction over ports, but the federal port policies applied to the National Harbours Board ports differ substantially from policies applied to the commission ports. The federal government underwrites any operating losses for national harbours and supplies funds for their capital projects at low interest rates. The commission harbours, on the other hand, operate on a commercial basis and obtain their capital funds at market rates. The nationally sponsored harbours are, therefore, able to maintain a lower set of terminal charges than the commission harbours.

The difference in terminal rates between the two types of harbours affects the amount of traffic allocated to different modes of transport and to different routes and patterns of trade. In this

way, the harbour charges affect the competitive situation of domestic transportation facilities and the allocation of economic resources.

The economic impact of ports permeates throughout all regions of Canada and an equitable system of port charges is therefore a significant factor in the formulation of national economic development policies.

APPENDIX

COMPARISON OF "AVERAGE" COSTS[3] 1973

Table I

System[2]	Capital Cost of Vehicle		Cost in ¢ per Mile of Vehicle Operation				Average Vehicle Occupancy	Total Cost per pass. mi.
	Vehicle $/unit	Vehicle $/seat	Vehicle operation incl. maint. & parking	Depreciation of vehicle & way	Maint. cost of way & system	Total cost		
AUTOS:								
Scooter - seats	500	250	2	2.1	0.1	4.2	1	4.2
Small Auto - 4 seats								
Without parking	2500	625	4	4.2	0.3	8.5	1.5	5.7
With parking	2500	625	10	4.2	0.3	14.5	1.6	9.1
Large Auto - 6 seats								
Without parking	5000	833	6	8.5	0.5	15.0	1.5	10.0
With parking	5000	833	12	8.5	0.5	21.0	1.6	13.1
BUS TRANSIT								
Limousine Bus (23 pass.)	20000	850	90[1]	12	20	122	15	8.1
Small Bus (35 pass.)	35000	1000	80[1]	15	20	115	20	5.8
Large Bus (50 pass.)	45000	900	75[1]	20	20	115	30	3.8
PARA-TRANSIT								
Taxi	3300	1100	53	11	14	78	2	39.0
Dial-A-Bus Van (14 pass.)	9000	630	90	10	30	139	8	16.2
SUBWAY	235000	3000	60	60	30	150	50	3.0

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[1] Present bus designs are most efficient in the larger sizes.

[2] Systems have widely different characteristics and are seldom directly competitive.

[3] This table of average costs displays some of the significant differences between systems; but it disguises some variations within a system. The subway cost of 3¢ per pass. mi., for example, can only be achieved with high efficiency and high utilization. Costs between 10¢ and 30¢ per pass. mi. are experienced on some subway type systems. Ontario's GO transit is about 10¢ and BART about 18¢ (mostly capital).

SOURCE: N.D. Lea & Associates Ltd., Toronto.